NOT FOR PUBLICATION

Online Appendix to "Health Insurance Mandates, Mammography, and Breast Cancer Diagnoses"
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The Reference Window Problem

Note that the BRFSS questions introduce a "reference window" problem due to the fact that the questions typically ask about screening behavior over some recent period. Given this, it is important to account for the systematic BRFSS interview structure when defining someone as treated by the policy in question. Specifically, we can make use of the fact that BRFSS interviews are distributed almost uniformly across the calendar year and we know the month of interview. This information, coupled with our decision rule regarding when individuals are first treated, means that we can create a more precise treatment variable that captures the share of the recent period that the individual was treated by the mammography mandate. The intuition here is straightforward: since we define a policy to turn "on" in January 1 of the year following adoption, it is true that people interviewed in, say, February of what we define as the first treatment year will have only been exposed to two months of treatment in the last year while people interviewed in, say, November of that same year in that same state will have been exposed to 11 months of treatment in the last year. Similarly, for the past two year outcomes we code individuals interviewed in January after the adoption year as being treated 1/24, February of the adoption year as being treated 2/24, and so forth, until December of the following year (i.e., December in the second year after adoption) as being fully treated (i.e., 24/24). Note that even if our assumptions about when insurance policies reset are incorrect, it remains the case that people interviewed toward the beginning of the calendar years immediately after implementation will, by construction, have less potential treatment than individuals interviewed toward the end of those calendar years no matter when during the exposure window the policy was implemented. Finally, note that since we do not observe birth date information in the BRFSS we are incorrectly coding some fraction of the reference window for people who "aged into" eligibility within the reference window (generally people who turned age 35, 40, or 50 within the reference window for our measure of mammogram in the last year). Given a (close to) uniform distribution of birthdays and correct self-reports of age, this measurement error will likely result in attenuation of our coefficients of interest.

Descriptive Statistics

Appendix Table 1 presents descriptive statistics of the key demographic variables as well as for the other screening outcomes used in this analysis for adult women in the BRFSS. Column 1 presents results for all women, while the remaining columns present associated descriptive statistics for age-specific samples of interest: 25 to 34 year old women, 35 to 39 year old women, 40 to 49 year old women, 50 to 64 year old women, and 65-74 year old women. (As in Figure 2, the 35-39 year old, 40-49 year old, and 50 and older age groups reflect the modal laws.) We present basic demographic characteristics (e.g., race/ethnicity, education, marital status) as well as the fraction of women in each group who had a past year Pap test or clinical breast exam (CBE), neither of which should have been affected by the mammography mandates and thus serve as dependent variables in placebo tests. The patterns of demographic characteristics across groups indicate that most of the sample for each age group is white non-Hispanic, while about ten percent of the sample is black non-Hispanic, and nine percent of the sample is Hispanic. Educational attainment is predictably higher for younger women compared to the women age 50–64 or 65-74. About two-thirds of the sample is married and over 85 percent of women report that they have a health plan. Finally, note that other non-mammography screening levels (past year Pap tests and clinical breast exams) are fairly regularly high across age groups—much higher than the associated mammography rates in Table 1 (in text)—and show the opposite age patterns (i.e., younger women are more likely to obtain these screenings).

Additional Robustness Results

Appendix Tables 2-9 report the full sets of results complementing those reported in Tables 2 and 3 of the paper. Specifically, the text describes how the choice regarding the proper coding of the mandate variables for 65-74 year old women is not obvious. Our main specifications report estimates from models that code the mandate variables for 65-74 year old women as equal to whatever is true for 50-64 year old women within the state. Appendix Table 2 simply reprints Table 2 from the paper. An alternative approach would be to code all the mandate variables as 'off' for 65-74 year old women. Appendix Table 3 reports results from precisely this specification (i.e., coding the mandates to be equal to zero for women age 65-74,

except for two states – Colorado and Oklahoma – that explicitly cover women exactly age 65). Appendix Table 3 is thus the complement to the full set of results for past year mammogram in Appendix Table 2. The alternative choice regarding how to code mandates for 65-74 year old women has little effect on our findings: all of the DD estimates continue to be positive, sizable, and statistically significant in the 'Scaled' and 'Any' mandate models, and the same is true for the biennial and annual mandate variables in the 'Expanded' specification. As with the results in Appendix Table 2, we lose statistical significance in the DDD models [except for a wrong-signed baseline mammogram mandate estimate in the 'expanded' specification], but the point estimates remain sizable and positive for the 'Scaled' and 'Any' specifications, as well as for the annual and biennial mandate variables in the 'Expanded' specification.

Appendix Table 4 reports the full set of results for the outcome 'Had Mammogram in the Past Year and the Last One was Routine' corresponding to the top row of results in Table 3 of the paper. The difference is that Appendix Table 4 reports results from all specifications, not just the 'Scaled' mandate specification. Appendix Table 5 reports the full set of results for that same outcome but with the alternative policy coding that turns the mandate variables off for all women age 65-74. Appendix Tables 6 and 7 and Appendix Tables 8 and 9 do this same pair of exercises for the final two outcomes we consider: 'Had a Mammogram in the Past 2 Years' and 'Ever Had a Mammogram'. The results from these models confirm that the findings in Tables 2 and 3 are robust.

In Appendix Table 10 we report the full set of results from the top panel of Table 4 in the main paper that shows that the 'Scaled' specification returns no evidence that mammography mandates are related to the BRFSS health plan variable. Appendix Table 10 reports the results from that same 'null finding' exercise but for the 'Any' and 'Expanded' specifications as well and confirms no substantive relationship between having a health plan and the mammography mandates. Appendix Table 11 shows this same basic result using a different dataset, the March Current Population Survey. The March CPS allows us to identify women who have private insurance (as opposed to any health plan, which is all we observe in the BRFSS). Most mandate estimates in Appendix Table 11 are very small and statistically insignificant; the few that are significant at the ten percent level are as likely to be positive as they are to be negative. Taken together, these results show no consistent meaningful effects of mammography mandates on the likelihood a woman reports having private health insurance.

Appendix Tables 12 and 13 return to the BRFSS data and report the full set of results corresponding to the third and fourth panels of Table 4 from the main paper. The results in Appendix Tables 12 and 13 are consistent with the idea that mandates work through the sample of people with a health plan. Specifically, Appendix Table 12 shows that the scaled mandate estimates for the sample of women with a health plan are consistently sizable and positive [between 1.7 and 2.5 percentage point increases in past year screening], and the column 4 estimate in Appendix Table 12 is 1.7 percentage points and is statistically significant at the ten percent level. In contrast, the coefficient on the mandate variable in the scaled mandate specification for women without a health plan in Appendix Table 13 is no larger than 0.004 in any of the DD specifications of columns 1-3 and is wrong-signed to be in our favor [but statistically insignificant] in the DDD specification of column 4. While we acknowledge the presence of unexplained positive and statistically significant coefficients on the biennial mammogram mandate in the expanded specification for women without a health plan in the DD models of columns 1-3 [which are also observed among women with a health plan in the same models in Appendix Table 12], we note that the DDD estimate is negative and statistically insignificant in both samples. Finally, we note that the coefficient on the annual mammogram mandate in the expanded specification – which drives the bulk of our true mandate effect – is positive, sizable, and statistically significant in columns 1-3 of Appendix Table 12 for women with a health plan while the associated estimate is small and statistically insignificant in the associated models of Appendix Table 13 for women without a health plan. Overall, we believe that the mammography mandates for annual screenings are driving our key effects, and this is broadly supported in Appendix Tables 10-13 which – to summarize – indicate that: 1) there is no substantive relationship between mandates and health insurance status and 2) the estimated mandate effects work mainly through the sample of women with a health plan.

In Appendix Table 14 we directly examine whether mandates affected other screening behaviors by women that are also related to preventive health. Specifically, we considered clinical breast exams (CBE) (manual examinations of the breast performed by a physician that do not involve X-rays) and Pap tests (the standard cervical cancer screening test). Both CBEs and Pap tests are cheaper than mammograms and are typically carried out during an office visit to a GP or OB/GYN, unlike mammograms which are typically done in a separate facility and by a different person than one's GP or OB/GYN. If mandates were increasing all types of women's

health care use equally, we might be less convinced that the effects we have identified are really due to the effects of the insurance mandates and may instead be proxying for other types of outreach efforts or information campaigns regarding women's preventive health behaviors other than mammography screening for breast cancer. The results in Appendix Table 14 reveal some positive and statistically significant increases in both CBEs and Pap tests associated with mammography mandate adoption. Notably, however, they are much smaller in magnitude than the estimates on past year mammography rates: for example, the basic difference in difference estimate of the effect of a Scaled Mandate on past year mammography in Table 2 was 5 percentage points; for CBE and Pap test in Appendix Table 14 it is 1 and 1.2 percentage points, respectively (with even larger differences when measured as a proportion of the sample mean). While the small estimated increases may reflect real spillover effects of the mandates (e.g., a woman who is induced by the law to get a mammogram may find out she also needs a Pap test during the visit), the fact that they are only a fraction of the size of the increases in mammograms suggests that the large majority of the direct effects of the mandates we identify are unlikely to be proxying for other unobserved outreach efforts pertaining to women's health more generally.

In Appendix Table 15 we show that the relationship between mandates for annual mammograms and past year mammography is robust to restricting attention to the sampled years in which we observe outcomes related to clinical breast exams and Pap tests. The format for Appendix Table 15 is slightly different in that we only show results for the 'Scaled' specification and we report the various fixed-effects models in panels from top to bottom (as opposed from left to right in the earlier tables). In Appendix Table 15 – as in the earlier Appendix Tables – each estimate is from a separate model. In column 1 of Appendix Table 15 we show that over the period 1990–2000 (the sample in states and years when questions about clinical breast exams were asked), mammography mandates for annual screenings were associated with meaningful increases in past year mammography rates, and in column 2 we show that the main finding is similarly robust over the period 1988–2000 (the sample in states and years when Pap test questions were asked).

In Appendix Table 16 we provide further evidence on the robustness of our estimated effects of insurance mandates on past year mammography rates, and Appendix Table 16 takes the format of Appendix Table 15 in showing results from the 'Scaled' specification with various fixed-effects models moving from the top panel to the bottom panel. First, we further address

issues about the unbalanced panel nature of the BRFSS data. Recall that states began participating throughout the late 1980s and early 1990s. Column 1 shows that restricting attention to all states observed continuously from 1989–2000 produces similar estimates to those reported in Table 2.[1] Column 2 of Appendix Table 16 shows that when we replace the 5-year age group dummy variables with single year of age dummy variables (as well as all of the relevant single-year-of-age-based interaction terms), we obtain similar results. Column 3 of Appendix Table 16 shows that our consistent findings of significant increases in screenings attributable to mandates for annual mammograms is larger and more precisely estimated for the much more common "cover" mandates than for the small number of "offer" mandates, as expected.

We show effects by race/ethnicity for the 'Scaled' mandate specification in Appendix Table 17, whose format follows Appendix Tables 15 and 16. We find statistically significant effects for non-Hispanic white women in all models and for non-Hispanic black women and other race women in all of the DD models. All but one of the insignificant estimates is positive and sizable in magnitude, suggesting broad-based increases in screening rates across race/ethnic groups induced by the mandates. Appendix Table 18 reports results by education group. Here again we find very broad-based evidence of significant increases for all the DD-based specifications for women across the education distribution. In the DDD models of the bottom row, however, none of the individual estimates is statistically significant, though the point estimates for both women with less than a high school degree and women with a college degree or more are both positive and sizable in magnitude.

Appendix Table 19 reports the results from Poisson count data models estimated on the SEER data for diagnoses of in-situ pre-cancers corresponding to Table 6 in the main paper. The results from the Poisson models generally support the results from the log counts models reported in the paper in that the 'Any' and 'Expanded' mandate specifications both return evidence of statistically significant increases in in-situ diagnoses.

Appendix Table 20 reports results corresponding to Table 7 in the main paper asking whether the increases in screenings are attributable to mandates that are or are not consistent with current ACS recommendations. Appendix Table 20 asks this important question in a

[1] The same is true when we restricted attention to states in a balanced panel from 1987-2000 or using the balanced panel of states observed in 1987 and 1989-2000 (keeping in mind that the questions were asked to a small subset of women in 1988 (due to being asked only in a few states in 1988)).

different way by controlling for whether the mandates are or are not consistent with ACS recommendations at the time of interview (as opposed to current ACS recommendations). The idea is that these results provide a sense of whether the mandate-induced increases in screenings were consistent with the state of science as was known when the woman was having her mammogram (to the extent that this scientific knowledge was reflected in ACS guidelines at that time). Each column of Appendix Table 20 represents a different model, and the other control variables are included but not reported. Looking mainly at the bottom set of estimates for the variable capturing whether the mandate is or is not consistent with ACS guidelines in effect at the time of interview for annual screenings (since we find most consistent evidence for the 'annual' variable in the 'Expanded' specification), we find that the vast majority of the increases in screenings were attributable to mandates that were consistent with ACS guidelines (and thus likely to be broadly representative of the state of science) at the time of interview.

Distinguishing Screening Guidelines from Mandates

Recall that because screening recommendations are made by national organizations such as the American Cancer Society (ACS) and the United States Preventive Services Task Force (USPSTF), they are accounted for in the DDD models through the inclusion of year and year-by-age-group fixed effects. That is, the guidelines do not contribute any identifying variation to the mandate variables of interest in the triple differences specification. Here we explicitly show that there is meaningful independent variation between the screening guidelines and the mammography mandates.

Recall from the paper that Figure 2 shows evidence of increases in mammography screening rates at the age thresholds recommended by the American Cancer Society and other various medical organizations. This same issue has been examined using more recent versions of the BRFSS and other data by Kadiyala and Strumpf (2011a, b). For example, Figure 2 shows that in 1987 there is a discrete spike in past year mammography rates exactly at age 35 that subsequently reverts to lower levels. This is consistent with some proportion of women responding to the ACS recommendation in 1987 that women get a baseline screening at age 35. The evidence of a jump at age 35 is much weaker in the age profiles for 1994 and 2000; this may reflect that the ACS removed the 'baseline' screening recommendation in 1992. There is also some evidence of a discrete increase in past year mammography screening rates at age 40,

consistent with the ACS guideline and prior USPSTF recommendations, though there is not strong visual evidence of increases in screenings at age 50.

A natural question that arises from Figure 2 and previous work, then, is: how much of the increase in mammography screening that we document in the paper and attribute to mammography mandates should be more properly attributed to recommendations of ACS, USPSTF, and other major medical organizations? Indeed, since many states explicitly base the benefits in their mammography mandates on these guidelines, it is natural to ask to what extent we can reasonably identify the effects of mandates separately from changes in these age-specific guidelines over time. To provide direct commentary on this issue, we present visual evidence in Appendix Figures 1-3 that our identifying mandate variation is distinct from the major guideline variation over this time period.

Specifically, Appendix Figure 1 shows, for each year of our sample, the share of women age 25-74 in our BRFSS data who: 1) we code as being treated by a mandate providing for a baseline mammogram screening in each year; 2) would be subject to a recommendation for a baseline mammogram screening according to the ACS guidelines in each year; and 3) would be subject to a recommendation for a baseline mammogram screening according to the USPSTF in each year. An increasing share of women is eligible for a baseline mammogram benefit over our sample period due to state policy adoptions. This proportion levels off by about 1994 at about 12 percent of the sample. In contrast, the proportion of women who would be subject to either an ACS-recommended baseline screening (equal to about 15 percent of the sample until 1993, when it drops to 0 after the ACS removed the baseline screening recommendation from its guidelines) or a USPSTF-recommended baseline screening (equal to 0 percent of women over the entire period since the USPSTF never recommended baseline screenings) exhibit very different time series patterns over this time period. Appendix Figures 2 (for biennial screenings) and 3 (for annual screenings) make the same basic point and show clearly that the time series variation in the proportion of women subject to each type of mandate is very different than the associated variation in the proportion of women subject to either an ACS or a USPSTF guideline for the same frequency of screening.

Event Study Estimates Separately for 40-49 year olds and 50-64 year olds

The paper shows event study estimates of the effects of mandates for annual screening on past year mammography for 40-64 year old women. Appendix Figures 4 and 5 show the event studies for 40-49 and 50-64 year old women, respectively, using the same state restrictions as described in the text. Note that the timing of the variation in annual mandates for 40-49 year old women means that there are only three states contributing to Appendix Figure 4. Appendix Figure 6 shows a variant of the event study for 40-49 year old women that relaxes the balanced panel restriction, increasing the number of states to 14. Results indicate that the upward pre-trend observed in Figure 3 is driven by 50-64 year old women, as seen in Appendix Figure 5. Like Figure 3, however, Appendix Figure 5 also shows that mammography screenings were significantly higher 4-6 years following mandate adoption. For 40-49 year old women we do not find strong evidence of pre-trends in screenings, and for the sample that relaxes the balanced panel requirement in Appendix Figure 6 we find significant increases in screenings 2-4 years following mandate adoption.

Appendix Table 1
Descriptive Statistics, BRFSS Females

Variable	All ages 25–74	Age 25–34	Age 35–39	Age 40–49	Age 50–64	Age 65-74
White non-Hispanic	.775	.722	.749	.769	.806	.848
Black non-Hispanic	.102	.114	.106	.104	.095	.083
Other race non-Hispanic	.032	.040	.037	.036	.027	.018
Hispanic	.087	.120	.105	.086	.068	.046
Less than high school degree	.139	.093	.093	.099	.177	.262
HS degree	.345	.315	.319	.328	.386	.384
Some college	.264	.290	.289	.281	.235	.214
Bachelors degree or more	.250	.301	.298	.290	.199	.136
Married	.658	.636	.710	.709	.681	.537
Widowed/Divorced/Separated	.230	.121	.169	.212	.275	.426
Never married	.093	.204	.095	.061	.037	.033
Living with a partner	.018	.038	.023	.015	.005	.002
Has any health plan (1991-00)	.877	.824	.856	.874	.882	.980
Had Pap test last year (from 1988)	.670	.774	.703	.674	.624	.522
Had clinical breast exam last year (from 1990)	.691	.723	.680	.683	.691	.656
N	696761	170352	97610	162580	163195	103024

Notes: Author calculations from 1987–2000 BRFSS adult females 25–74 who completed interviews by December 2000. Some of the variables are not defined in some of the years (e.g., health insurance is not asked until 1991). Statistics are weighted. Between 0.1% and 0.3% of observations are missing values for education, marital status, or health insurance. Questions about health plans, Pap tests, and clinical breast exams are not asked for all years and all states, and thus are reported for a smaller number of observations than the reported N.

Appendix Table 2: [Equivalent to Table 2 in Paper]
Mammography Insurance Mandates Significantly Increased 'Had Mammogram in Past Year'
BRFSS 1987-2000, Adult Women 25-74
Mandate variable for 65-74 year old women set to whatever is true for 50-64 year old women in the state [N=693154]

Model is ➔ / Mandate specification is ↓	(1) State and year fixed effects	(2) (1) + linear state trends	(3) (2) + quadratic state trends	(4) DDD
Scaled Mandate Specification				
[Annual=1; Biennial=.5; Baseline=.2]	.050***	.050***	.054***	.010
	(.013)	(.013)	(.014)	(.007)
Adjusted R squared	.21	.21	.21	.22
Any Mandate Specification				
Treated by any mammography mandate	.037***	.037***	.040***	.005
	(.007)	(.007)	(.007)	(.007)
Adjusted R squared	.21	.21	.21	.22
Expanded Mandate Specification				
Treated by mandate for baseline mammogram	.005	.003	.006	-.015*
	(.008)	(.008)	(.007)	(.009)
Treated by mandate for biennial mammogram	.035***	.035***	.038***	.011
	(.009)	(.009)	(.009)	(.012)
Treated by mandate for annual mammogram	.050***	.050***	.055***	.009
	(.012)	(.012)	(.012)	(.007)
Adjusted R squared	.21	.21	.21	.22

Notes: Each panel of each column shows the results from a separate regression model. Sample size for all models is 693,154. The dependent variable in all models is had a mammogram in the past year. Additional controls in all models include: five-year age group dummies; Pap test mandates; state participation in the NBCCEDP program; laws mandating access to OB/GYNs; Medicare coverage of Pap tests and mammograms for women age 65 and older; race/ethnicity; education; marital status; share of women 15–44 with private health insurance; share of women who work or who have a husband who works at a firm with 24 or fewer employees, 25–99 employees or 100 or more employees; the unemployment rate; welfare reform; the level of HMO penetration (as a share of the population); the number of obstetric beds per 100 women 15–44; the eligibility threshold for Medicaid eligibility for a pregnant woman in the state as a share of the FPL; share urban; share black; share Hispanic; and state, year, and month of interview fixed effects. Models in column 2 add linear state trends. Models in column 3 add quadratic state trends. Models in column 4 replace the trends and state by year controls with state by age group, year by age group, and state by year fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%. Standard errors throughout are clustered at the state level and estimates are weighted.

Appendix Table 3:
Mammography Insurance Mandates Significantly Increased 'Had Mammogram in Past Year'
BRFSS 1987-2000, Adult Women 25-74
Mandate variable for 65-74 year old women set to zero [N=693154]

Model is ➔ / Mandate specification is ↓	(1) State and year fixed effects	(2) (1) + linear state trends	(3) (2) + quadratic state trends	(4) DDD
Scaled Mandate Specification				
[Annual=1; Biennial=.5; Baseline=.2]	.045***	.045***	.047***	.009
	(.013)	(.013)	(.014)	(.006)
Adjusted R squared	.21	.21	.21	.22
Any Mandate Specification				
Treated by any mammography mandate	.030***	.028***	.030***	.003
	(.008)	(.007)	(.007)	(.006)
Adjusted R squared	.21	.21	.21	.22
Expanded Mandate Specification				
Treated by mandate for baseline mammogram	-.0003	-.002	-.001	-.016*
	(.009)	(.009)	(.008)	(.009)
Treated by mandate for biennial mammogram	.031***	.030***	.030***	.010
	(.010)	(.010)	(.009)	(.010)
Treated by mandate for annual mammogram	.045***	.044***	.046***	.008
	(.013)	(.013)	(.013)	(.007)
Adjusted R squared	.21	.21	.21	.22

For details on control variables and specifications, see Appendix Table 2.

Appendix Table 4:
Mammography Insurance Mandates Significantly Increased 'Had Mammogram Last Year and Last one Was Routine'
BRFSS 1987-2000, Adult Women 25-74

Mandate variable for 65-74 year old women set to whatever is true for 50-64 year old women in the state [N=691488]

Model is ➔ / Mandate specification is ↓	(1) State and year fixed effects	(2) (1) + linear state trends	(3) (2) + quadratic state trends	(4) DDD
Scaled Mandate Specification				
[Annual=1; Biennial=.5; Baseline=.2]	.050***	.050***	.055***	.016**
	(.013)	(.013)	(.014)	(.007)
Adjusted R squared	.20	.20	.20	.20
Any Mandate Specification				
Treated by any mammography mandate	.040***	.039***	.043***	.014*
	(.008)	(.008)	(.008)	(.008)
Adjusted R squared	.20	.20	.20	.20
Expanded Mandate Specification				
Treated by mandate for baseline mammogram	.011	.010	.014*	.004
	(.009)	(.008)	(.008)	(.009)
Treated by mandate for biennial mammogram	.038***	.038***	.041***	.016
	(.010)	(.010)	(.009)	(.012)
Treated by mandate for annual mammogram	.051***	.051***	.056***	.017**
	(.012)	(.012)	(.013)	(.008)
Adjusted R squared	.20	.20	.20	.20

For details on control variables and specifications, see Appendix Table 2.

Appendix Table 5:
Mammography Insurance Mandates Significantly Increased 'Had Mammogram Last Year and Last one Was Routine'
BRFSS 1987-2000, Adult Women 25-74
Mandate variable for 65-74 year old women set to zero [N=691488]

Model is ➔ Mandate specification is ↓	(1) State and year fixed effects	(2) (1) + linear state trends	(3) (2) + quadratic state trends	(4) DDD
Scaled Mandate Specification				
[Annual=1; Biennial=.5; Baseline=.2]	.046***	.046***	.049***	.011*
	(.013)	(.013)	(.014)	(.007)
Adjusted R squared	.20	.20	.20	.20
Any Mandate Specification				
Treated by any mammography mandate	.033***	.032***	.034***	.009
	(.008)	(.008)	(.007)	(.006)
Adjusted R squared	.20	.20	.20	.20
Expanded Mandate Specification				
Treated by mandate for baseline mammogram	.007	.005	.007	.0002
	(.009)	(.009)	(.009)	(.009)
Treated by mandate for biennial mammogram	.033***	.033***	.034***	.012
	(.011)	(.010)	(.010)	(.009)
Treated by mandate for annual mammogram	.047***	.046***	.049***	.011*
	(.012)	(.012)	(.013)	(.007)
Adjusted R squared	.20	.20	.20	.20

For details on control variables and specifications, see Appendix Table 2.

Appendix Table 6:
Mammography Insurance Mandates Significantly Increased 'Had Mammogram in Past 2 Years'
BRFSS 1987-2000, Adult Women 25-74

Mandate variable for 65-74 year old women set to whatever is true for 50-64 year old women in the state [N=693154]

Model is ➔ / Mandate specification is ↓	(1) State and year fixed effects	(2) (1) + linear state trends	(3) (2) + quadratic state trends	(4) DDD
Scaled Mandate Specification				
[Annual=1; Biennial=.5; Baseline=.2]	.056***	.055***	.060***	.014*
	(.016)	(.016)	(.017)	(.008)
Adjusted R squared	.28	.28	.28	.29
Any Mandate Specification				
Treated by any mammography mandate	.049***	.049***	.052***	.014
	(.009)	(.009)	(.010)	(.008)
Adjusted R squared	.28	.28	.28	.29
Expanded Mandate Specification				
Treated by mandate for baseline mammogram	.019**	.018**	.021**	.001
	(.009)	(.009)	(.008)	(.010)
Treated by mandate for biennial mammogram	.053***	.053***	.056***	.020
	(.012)	(.012)	(.012)	(.015)
Treated by mandate for annual mammogram	.060***	.059***	.064***	.015*
	(.014)	(.015)	(.015)	(.009)
Adjusted R squared	.28	.28	.28	.29

For details on control variables and specifications, see Appendix Table 2.

Appendix Table 7:
Mammography Insurance Mandates Significantly Increased 'Had Mammogram in Past 2 Years'
BRFSS 1987-2000, Adult Women 25-74
Mandate variable for 65-74 year old women set to zero [N=693154]

Model is ➔ / Mandate specification is ↓	(1) State and year fixed effects	(2) (1) + linear state trends	(3) (2) + quadratic state trends	(4) DDD
Scaled Mandate Specification				
[Annual=1; Biennial=.5; Baseline=.2]	.051***	.050***	.052***	.008
	(.016)	(.017)	(.017)	(.007)
Adjusted R squared	.28	.28	.28	.29
Any Mandate Specification				
Treated by any mammography mandate	.042***	.040***	.041***	.008
	(.010)	(.010)	(.010)	(.007)
Adjusted R squared	.28	.28	.28	.29
Expanded Mandate Specification				
Treated by mandate for baseline mammogram	.013	.011	.013	-.003
	(.010)	(.010)	(.009)	(.010)
Treated by mandate for biennial mammogram	.048***	.046***	.046***	.014
	(.013)	(.013)	(.013)	(.013)
Treated by mandate for annual mammogram	.054***	.052***	.054***	.008
	(.015)	(.015)	(.016)	(.008)
Adjusted R squared	.28	.28	.28	.29

For details on control variables and specifications, see Appendix Table 2.

Appendix Table 8:
Mammography Insurance Mandates Significantly Increased 'Ever had a Mammogram'
BRFSS 1987-2000, Adult Women 25-74
Mandate variable for 65-74 year old women set to whatever is true for 50-64 year old women in the state [N=695109]

Model is ➔ / Mandate specification is ↓	(1) State and year fixed effects	(2) (1) + linear state trends	(3) (2) + quadratic state trends	(4) DDD
Scaled Mandate Specification				
[Annual=1; Biennial=.5; Baseline=.2]	.044***	.043***	.045***	.003
	(.012)	(.013)	(.013)	(.008)
Adjusted R squared	.33	.33	.33	.34
Any Mandate Specification				
Treated by any mammography mandate	.046***	.045***	.048***	.007
	(.009)	(.009)	(.009)	(.006)
Adjusted R squared	.33	.33	.33	.34
Expanded Mandate Specification				
Treated by mandate for baseline mammogram	.029***	.029***	.031***	.003
	(.010)	(.010)	(.010)	(.010)
Treated by mandate for biennial mammogram	.052***	.052***	.054***	.012
	(.011)	(.011)	(.011)	(.008)
Treated by mandate for annual mammogram	.049***	.049***	.052***	.005
	(.011)	(.012)	(.012)	(.008)
Adjusted R squared	.33	.33	.33	.34

For details on control variables and specifications, see Appendix Table 2.

Appendix Table 9:
Mammography Insurance Mandates Significantly Increased 'Ever had a Mammogram'
BRFSS 1987-2000, Adult Women 25-74
Mandate variable for 65-74 year old women set to zero [N=695109]

Model is ➔ / Mandate specification is ↓	(1) State and year fixed effects	(2) (1) + linear state trends	(3) (2) + quadratic state trends	(4) DDD
Scaled Mandate Specification				
[Annual=1; Biennial=.5; Baseline=.2]	.043***	.041***	.042***	.006
	(.013)	(.013)	(.013)	(.006)
Adjusted R squared	.33	.33	.33	.34
Any Mandate Specification				
Treated by any mammography mandate	.042***	.041***	.041***	.008
	(.009)	(.009)	(.009)	(.005)
Adjusted R squared	.33	.33	.33	.34
Expanded Mandate Specification				
Treated by mandate for baseline mammogram	.025**	.024**	.025**	.003
	(.010)	(.010)	(.010)	(.010)
Treated by mandate for biennial mammogram	.049***	.048***	.049***	.013
	(.011)	(.011)	(.011)	(.008)
Treated by mandate for annual mammogram	.047***	.045***	.046***	.007
	(.011)	(.012)	(.012)	(.006)
Adjusted R squared	.33	.33	.33	.34

For details on control variables and specifications, see Appendix Table 2.

Appendix Table 10:
Mammography Insurance Mandates Unrelated to Whether Woman Has a Health Plan
BRFSS 1990-2000, Adult Women 25-74
Mandate variable for 65-74 year old women set to whatever is true for 50-64 year old women in the state [N=591650]

Controls for:	(1) Baseline DD model with state, month, and year fixed effects	(2) (1) + linear state trends	(3) (1) + quadratic state trends	(4) (1) + all two-way interactions among age group, state, and year (DDD)
Scaled Mandate Specification				
Annual=1; Biennial=.5; Baseline=.2	-.001	.001	.002	.004
	(.006)	(.006)	(.007)	(.007)
Adjusted R-squared	.11	.11	.11	.11
Any Mandate Specification				
Treated by any mammography mandate	.004	.006	.007	.004
	(.005)	(.005)	(.005)	(.006)
Adjusted R-squared	.11	.11	.11	.11
Expanded Specification				
Treated by mandate for baseline mammogram	.012	.013*	.014*	.009
	(.007)	(.008)	(.008)	(.007)
Treated by mandate for biennial mammogram	.002	.004	.005	.001
	(.005)	(.005)	(.005)	(.007)
Treated by mandate for annual mammogram	.002	.004	.005	.004
	(.006)	(.006)	(.006)	(.007)
Adjusted R-squared	.11	.11	.11	.11

For details on control variables and specifications, see Appendix Table 2.

Appendix Table 11:
Mammography Insurance Mandates Unrelated to Whether Woman Has Private Health Insurance
March CPS 1988-2000, Adult Women 25-74
Mandate variable for 65-74 year old women set to whatever is true for 50-64 year old women in the state [N=566666]

Controls for:	(1) Baseline DD model with state, month, and year fixed effects	(2) (1) + linear state trends	(3) (1) + quadratic state trends	(4) (1) + all two-way interactions among age group, state, and year (DDD)
Scaled Mandate Specification				
Annual=1; Biennial=.5; Baseline=.2	-.004	-.006	-.009	.013*
	(.006)	(.007)	(.008)	(.007)
Adjusted R-squared	.19	.19	.19	.19
Any Mandate Specification				
Treated by any mammography mandate	-.003	-.005	-.008*	.006
	(.004)	(.004)	(.004)	(.005)
Adjusted R-squared	.19	.19	.19	.19
Expanded Specification				
Treated by mandate for baseline mammogram	-.005	-.006	-.008*	-.006
	(.005)	(.004)	(.005)	(.007)
Treated by mandate for biennial mammogram	.001	.0002	-.003	.005
	(.003)	(.003)	(.004)	(.007)
Treated by mandate for annual mammogram	-.005	-.007	-.009	.012*
	(.006)	(.006)	(.007)	(.006)
Adjusted R-squared	.19	.19	.19	.19

For details on control variables and specifications, see Appendix Table 2 (with one exception, the CPS models do not control for state level average HI coverage from the CPS).

Appendix Table 12:
Mammography Insurance Mandate Effects, Among Women with a Health Plan, Had Mammogram in Past Year
BRFSS 1990-2000, Adult Women 25-74
Mandate variable for 65-74 year old women set to whatever is true for 50-64 year old women in the state [N=520312]

Controls for:	(1) Baseline DD model with state, month, and year fixed effects	(2) (1) + linear state trends	(3) (1) + quadratic state trends	(4) (1) + all two-way interactions among age group, state, and year (DDD)
Scaled Mandate Specification				
Annual=1; Biennial=.5; Baseline=.2	.023**	.024**	.025**	.017*
	(.011)	(.011)	(.012)	(.010)
Adjusted R-squared	.23	.23	.23	.23
Any Mandate Specification				
Treated by any mammography mandate	.019***	.020***	.022***	.005
	(.005)	(.005)	(.006)	(.009)
Adjusted R-squared	.23	.23	.23	.23
Expanded Specification				
Treated by mandate for baseline mammogram	.006	.006	.007	-.015
	(.006)	(.006)	(.006)	(.014)
Treated by mandate for biennial mammogram	.020***	.022***	.023***	-.001
	(.007)	(.007)	(.007)	(.011)
Treated by mandate for annual mammogram	.024***	.026***	.028***	.014
	(.009)	(.009)	(.010)	(.010)
Adjusted R-squared	.23	.23	.23	.23

For details on control variables and specifications, see Appendix Table 2.

Appendix Table 13:
Mammography Insurance Mandate Effects, Among Women without a Health Plan, Had Mammogram in Past Year
BRFSS 1987-2000, Adult Women 25-74
Mandate variable for 65-74 year old women set to whatever is true for 50-64 year old women in the state [N=69119]

Controls for:	(1) Baseline DD model with state, month, and year fixed effects	(2) (1) + linear state trends	(3) (1) + quadratic state trends	(4) (1) + all two-way interactions among age group, state, and year (DDD)
Scaled Mandate Specification				
Annual=1; Biennial=.5; Baseline=.2	.0004	.002	.004	-.022
	(.011)	(.012)	(.012)	(.028)
Adjusted R-squared	.11	.11	.11	.12
Any Mandate Specification				
Treated by any mammography mandate	.007	.010	.014	-.012
	(.010)	(.010)	(.010)	(.017)
Adjusted R-squared	.11	.11	.11	.12
Expanded Specification				
Treated by mandate for baseline	-.008	-.005	-.001	.002
mammogram	(.009)	(.009)	(.009)	(.031)
Treated by mandate for biennial	.028**	.032**	.036***	-.008
mammogram	(.012)	(.012)	(.013)	(.021)
Treated by mandate for annual	.004	.007	.011	-.021
mammogram	(.012)	(.012)	(.013)	(.027)
Adjusted R-squared	.11	.11	.11	.12

For details on control variables and specifications, see Appendix Table 2.

Appendix Table 14
Mandate Coefficients on Clinical Breast Exams or Pap Tests Much Smaller
BRFSS 1988–2000, Adult Women 25–74, Scaled Mandate Specification

Specification is ➔ / Outcome is ↓	(1) State and year fixed effects	(2) (1) + linear state trends	(3) (2) + quadratic state trends	(4) DDD
Had a clinical breast exam in past year				
Scaled mandate	.010**	.010**	.012**	.005
	(.005)	(.005)	(.005)	(.008)
Adjusted R squared	.03	.04	.04	.04
N	625109	625109	625109	625109
Had a pap test in past year				
Scaled mandate	.012*	.016**	.015**	.006
	(.006)	(.007)	(.006)	(.009)
Adjusted R squared	.06	.06	.06	.06
N	630345	630345	630345	630345

Notes: Each entry shows the results from a separate regression model. The dependent variable in panel 1 is Clinical Breast Exam in past year. The dependent variable in panel 2 is Pap test in past year. Sample in panel 1 is all women 1990-2000, the period the clinical breast exam question was asked. Sample in panel 2 is all women 1988-2000, the period the Pap test question was asked. All specifications in the table report coefficients on the Scaled Mandate variable. The mandate variable for the specification in panels 1 and 2 account for the share of the year preceding the interview that the law was in effect. See notes to Table 2 for additional control variables. * significant at 10%; ** significant at 5%; *** significant at 1%. Standard errors throughout are clustered at the state level and estimates are weighted.

Appendix Table 15:
Mammography Mandate Estimates Similar to Baseline When Using the Same Sample as Available for CBE and Pap Robustness Tests
BRFSS 1987–2000, Adult Women 25–74

	Outcome is ➔	(1) Mammogram in past year	(2) Mammogram in past year
	Sample is ➔	1990–2000 (when CBE questions asked) [N=627,570]	1988–2000 (when Pap test questions asked) [N=633,658]
State and year fixed effects (DD)			
Scaled mandate		.020*	.033***
		(.011)	(.011)
DD + linear trends			
Scaled mandate		.021*	.034***
		(.011)	(.012)
DD + linear and quadratic trends			
Scaled mandate		.023*	.035***
		(.013)	(.012)
Fully interacted triple difference specification			
Scaled mandate		.008	.011
		(.008)	(.008)

Notes: Each column shows the results from the DD (row 1), DD with linear state-specific trends (row 2), DD with linear and quadratic state specific trends (row 3) or a separate DDD regression model (row 4); with the specifications in columns 1-4 of Table 2 (in text) but estimated for a different sample. The sample in column 1 includes the set of states and years in which questions about clinical breast exams were asked. The sample in column 2 includes the set of states and years in which questions about Pap tests were asked. See notes to Table 2 (in text) for list of additional control variables. * significant at 10%; ** significant at 5%; *** significant at 1%. Standard errors throughout are clustered at the state level and estimates are weighted.

Appendix Table 16:
Robustness Checks – Outcome is mammogram in past year
BRFSS, subset of 1987-2000, Adult Women 25-74

	(1) Balanced panel (no 87/88) [N=562,772]	(2) Single year of age controls [N=693,154]	(3) Cover vs. Offer Specification [N=693,154]
State and year fixed effects (DD)			
Scaled mandate	.054***	.050***	
	(.014)	(.013)	
Scaled cover mandate			.047***
			(.013)
Scaled offer mandate			.040***
			(.014)
DD + linear trends			
Scaled mandate	.054***	.050***	
	(.014)	(.013)	
Scaled cover mandate			.048***
			(.013)
Scaled offer mandate			.035**
			(.014)
DD + linear and quadratic trends			
Scaled mandate	.057***	.054***	
	(.015)	(.014)	
Scaled cover mandate			.052***
			(.014)
Scaled offer mandate			.034**
			(.016)
Fully interacted triple difference specification			
Scaled mandate	.008	.011*	
	(.008)	(.006)	
Scaled cover mandate			.013**
			(.006)
Scaled offer mandate			-.007
			(.011)

Notes: Each column shows the results from the DD (rows 1-3), DD with linear state-specific trends (rows 4-6), DD with linear and quadratic state specific trends (rows 7-9) or a separate DDD regression model (rows 10-12); with the specifications in columns 1-4 of Table 2 (in text), with the exception that the specification in column 2 includes single year of age dummies and interactions; and the mandate variables are split into cover or offer for column 3. The dependent variable in each model is equal to one if the woman had a mammogram in the past year. Relevant mandate variables account for the share of the year preceding the interview that the law was in effect. See notes to Table 2 (in text) for description of additional control variables. Sample in column 1 is a balanced set of state year cells (and excludes 1987 and 1988). Columns 2 and 3 use the full sample of women. * significant at 10%; ** significant at 5%; *** significant at 1%. Standard errors throughout are clustered at the state level and estimates are weighted.

Appendix Table 17:
Results by Race/Ethnicity: Mammography in Past Year
BRFSS 1987-2000, Adult Women 25-74

	(1) White, non-Hispanic [N=562,443]	(2) Black, non-Hispanic [N=65,523]	(3) Hispanic [N=37,950]	(4) Other race, non-Hispanic [N=23,749]
State and year fixed effects (DD)				
Scaled mandate	.055***	.051**	.035	.052**
	(.012)	(.022)	(.022)	(.022)
DD + linear trends				
Scaled mandate	.056***	.054**	.036	.041*
	(.012)	(.023)	(.022)	(.022)
DD + linear and quadratic trends				
Scaled mandate	.061***	.055**	.033	.048**
	(.013)	(.024)	(.022)	(.022)
Fully interacted triple difference specification				
Scaled mandate	.015**	.010	.045	-.031
	(.006)	(.023)	(.050)	(.044)

Notes: Each column shows the results from the DD (row 1), DD with linear state-specific trends (row 2), DD with linear and quadratic state specific trends (row 3) or a separate DDD regression model (row 4); with the specifications in columns 1-4 of Table 2 (in text) but estimated for a different sample. Column 1 sample is non-Hispanic white women; column 2 sample is non-Hispanic black women; column 3 sample is Hispanic women; and column 4 sample is non-Hispanic women who are neither black nor white. See notes to Table 2 (in text) for list of additional control variables. * significant at 10%; ** significant at 5%; *** significant at 1%. Standard errors throughout are clustered at the state level and estimates are weighted.

Appendix Table 18:
Results by Education Group: Mammography in Past Year
BRFSS 1987-2000, Adult Women 25-74

	(1) Less than high school degree [N=86,575]	(2) High school degree [N=236,187]	(3) Some college [N=190,376]	(4) College degree or more [N=178,983]
State and year fixed effects (DD)				
Scaled mandate	.042**	.053***	.041***	.039***
	(.018)	(.012)	(.010)	(.014)
DD + linear trends				
Scaled mandate	.044**	.051***	.039***	.042***
	(.019)	(.012)	(.011)	(.014)
DD + linear and quadratic trends				
Scaled mandate	.052**	.056***	.041***	.045***
	(.021)	(.013)	(.011)	(.014)
Fully interacted triple difference specification				
Scaled mandate	.018	-.003	.0002	.021
	(.026)	(.011)	(.017)	(.017)

Notes: Each column shows the results from the DD (row 1), DD with linear state-specific trends (row 2), DD with linear and quadratic state specific trends (row 3) or DDD regression model (row 4); with the specifications in columns 1-4 4 of Table 2 (in text) but estimated for a different sample. Column 1 sample is women with less than a high school degree; column 2 sample is women with exactly a high school degree; column 3 sample is women with some college education; and column 4 sample is women with at least a bachelor's degree. See notes to Table 2 (in text) for list of additional control variables. * significant at 10%; ** significant at 5%; *** significant at 1%. Standard errors throughout are clustered at the state level and estimates are weighted.

Appendix Table 19:
SEER-9 1985-2000 Poisson Models, In-Situ Cancer Incidence, Detection for 25-74 year olds
Collapsed by 5 year age group and race

	(1) DD	(2) DD + linear trends	(3) DD + quadratic trends	(4) DDD
Scaled Mandate Specification				
Annual=1; Biennial=.5; Baseline=.2	-.018	-.021	-.029	-.072
	(.041)	(.041)	(.042)	(.063)
Average marginal effect, evaluated at .2	-.477	-.556	-.792	-1.93
	(1.08)	(1.10)	(1.14)	(1.75)
Average marginal effect, evaluated at .5	-.474	-.552	-.785	-1.89
	(1.07)	(1.08)	(1.11)	(1.68)
Average marginal effect, evaluated at 1	-.470	-.547	-.773	-1.82
	(1.05)	(1.06)	(1.08)	(1.56)
Pseudo R-squared	.80	.80	.80	.81
N	1,440	1,440	1,440	1,440
Any Mandate Specification				
Treated by any mammography mandate	.036	.045	.030	.243**
	(.046)	(.042)	(.037)	(.106)
Average marginal effect, any mandate	.931	1.18	.785	6.36**
	(1.22)	(1.10)	(.957)	(2.79)
Pseudo R-squared	.80	.80	.80	.81
N	1,440	1,440	1,440	1,440
Expanded Specification				
Treated by mandate for baseline mammogram	.041	.048	.022	.282**
	(.095)	(.106)	(.099)	(.139)
Treated by mandate for biennial mammogram	.081	.093**	.078*	.306**
	(.056)	(.046)	(.040)	(.134)
Treated by mandate for annual mammogram	.024	.030	.016	.213**
	(.047)	(.041)	(.039)	(.098)
Average marginal effect, mandate for baseline	1.05	1.23	.575	6.43**
	(2.42)	(2.68)	(2.55)	(2.88)
Average marginal effect, mandate for biennial	2.09	2.40**	2.04**	7.21**
	(1.40)	(1.16)	(1.02)	(2.86)
Average marginal effect, mandate for annual	.616	.789	.412	5.34**
	(1.21)	(1.07)	(.998)	(2.38)
Pseudo R-squared	.80	.80	.80	.81
N	1,440	1,440	1,440	1,440

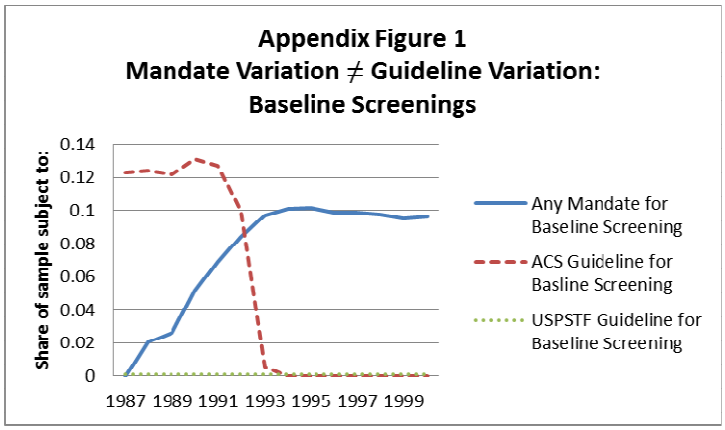
Notes: Each entry shows the coefficient from a separate regression model or the associated marginal effect. The dependent variable is the number of breast cancer diagnoses to women in various age groups using SEER-9 data. Though not shown, all models also include various fixed effects (column 1: state and year; column 2: state, year and state specific time trends; column 3: state, year, and a quadratic in state specific time trends; and column 4: state by age group, state by year, and age group by year fixed effects). All models include dummies for the relevant population of women in the age group (the other individual level Xs are not measured in SEER). Models in columns 1-4 include the state level Xs discussed in the text for Tables 2-5. * significant at 10%; ** significant at 5%; *** significant at 1%. Standard errors throughout are clustered at the state level. Marginal effects for the expanded specifications are evaluated setting the other mandate policies to zero.

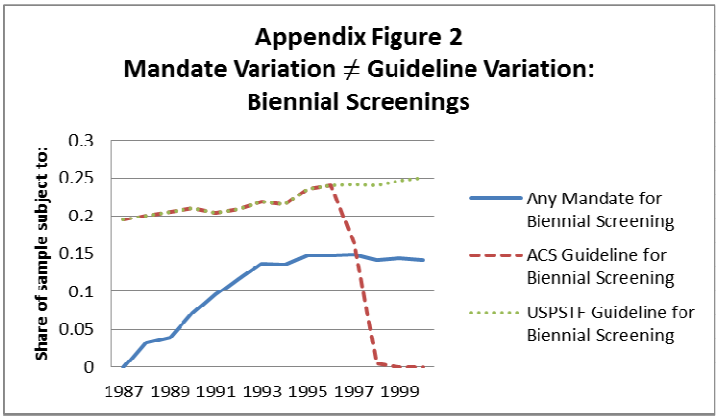
Appendix Table 20:
Mandate Effects by Whether Mandate is Consistent with ACS Guidelines
[Reflecting Science as Known at Time of Interview]
BRFSS 1987-2000, Women age 25-74

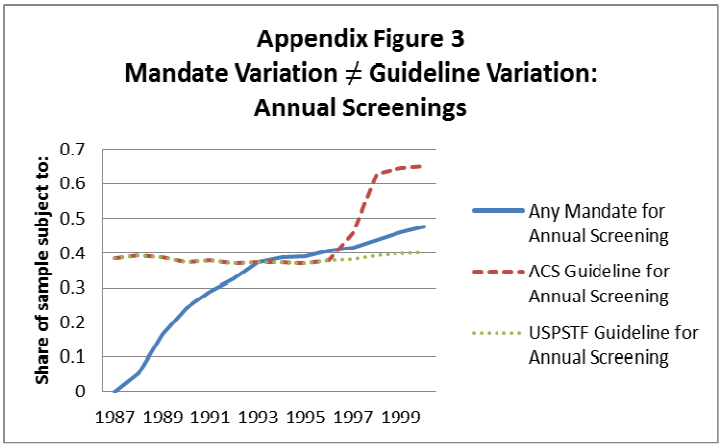
Mandate variable for 65-74 year old women set to whatever is true for 50-64 year old women in the state [N=693154]

Model is ➔ Mandate specification is ↓	(1) State and year fixed effects	(2) (1) + linear state trends	(3) (2) + quadratic state trends	(4) DDD
Expanded Mandate Specification				
Mandate is consistent with ACS guideline in effect at time of interview for **baseline**	.033*** (.010)	.033*** (.010)	.037*** (.009)	.001 (.010)
Mandate is not consistent with ACS guideline in effect at time of interview for **baseline**	-.010 (.010)	-.011 (.009)	-.008 (.009)	-.028** (.012)
Mandate is consistent with ACS guideline in effect at time of interview for **biennial**	.027*** (.010)	.027*** (.009)	.030*** (.009)	.010 (.011)
Mandate is not consistent with ACS guideline in effect at time of interview for **biennial**	.037*** (.009)	.036*** (.009)	.040*** (.009)	.016 (.017)
Mandate is consistent with ACS guideline in effect at time of interview for **annual**	.062*** (.011)	.062*** (.011)	.066*** (.012)	.010 (.008)
Mandate is not consistent with ACS guideline in effect at time of interview for **annual**	.012 (.012)	.013 (.012)	.020 (.012)	.009 (.008)
Adjusted R squared	.21	.21	.21	.22

For details on control variables and specifications, see Appendix Table 2.

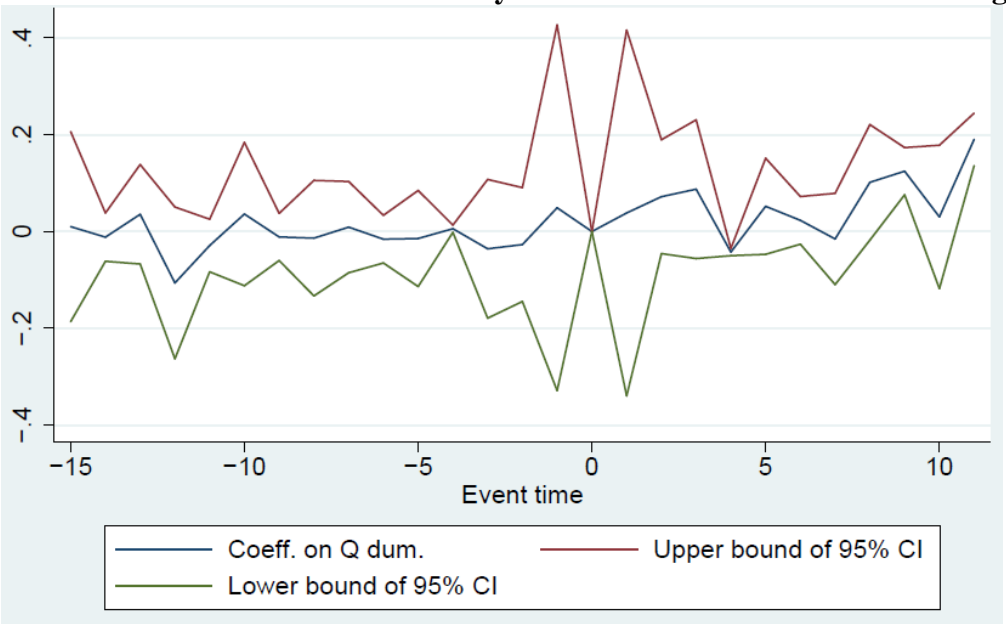






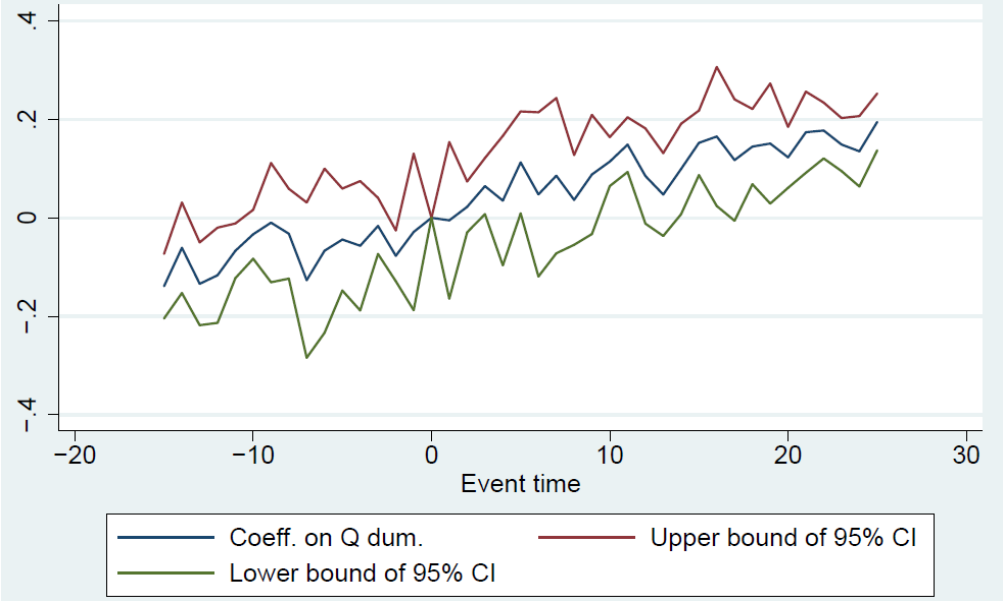
Appendix Figures 1,2, and 3 present the weighted mean share of women age 25-74 in pooled 1987-2000 BRFSS sample by survey year according to three criteria. The first (solid) line in each figure is the weighted mean share of women in each year who live in a state where a mandate for a baseline (Appendix Figure 1), biennial (Appendix Figure 2) or annual (Appendix Figure 3) screening mammogram was in effect for them. The second (dashed) line in each figure is the weighted mean share of women in each year for whom ACS screening guidelines recommended a baseline (Appendix Figure 1), biennial (Appendix Figure 2), or annual (Appendix Figure 3) screening mammogram. The third (dotted) line in each figure is the weighted mean share of women in each year for whom USPSTF screening guidelines recommended a baseline (Appendix Figure 1), biennial (Appendix Figure 2), or annual (Appendix Figure 3) screening mammogram. Note that the USPSTF does not recommend baseline screenings.

Appendix Figure 4
Event Study Estimates of the Effect of Mandates for Annual Screenings on Past Year Mammogram
BRFSS 1987-2000, Adult women age 40-49
States in Balanced Panel with Exactly One Mandate for Annual Screening



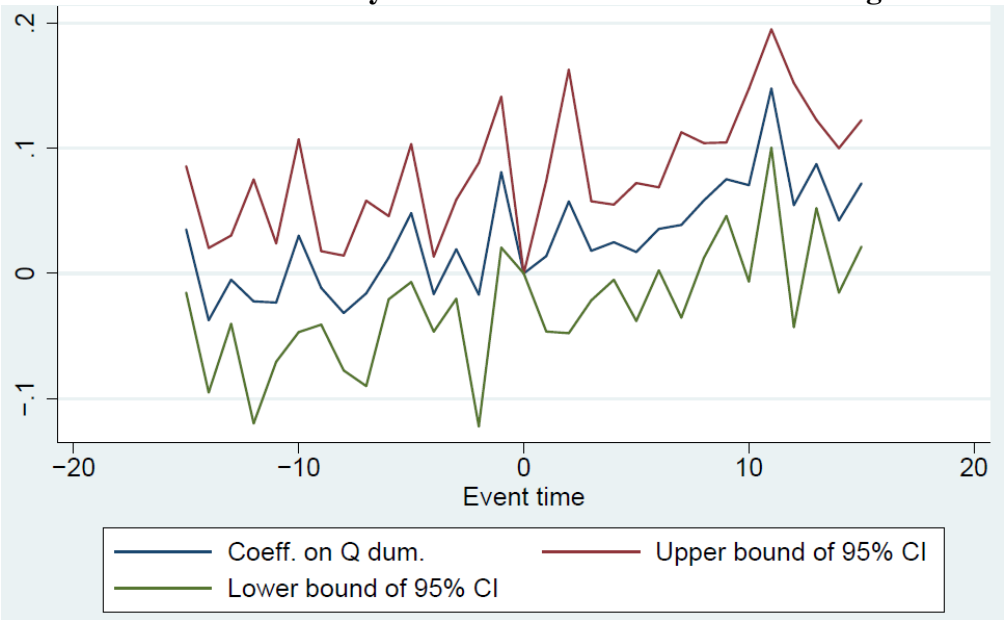
Appendix Figure 4 presents the results of an event study using the 1987-2000 BRFSS. Time is recentered so that time 0 is the first quarter during which a state implemented an annual mandate. The set of states is those who only implemented 1 annual mandate for women 40-49 and who participated in BRFSS for the entire 1987-2000 period. Models also control for state fixed effects and 5-year age group dummies. Standard errors are clustered at the state level.

Appendix Figure 5
Event Study Estimates of the Effect of Mandates for Annual Screenings on Past Year Mammogram
BRFSS 1987-2000, Adult women age 50-64



Appendix Figure 5 presents the results of an event study using the 1987-2000 BRFSS. Time is recentered so that time 0 is the first quarter during which a state implemented an annual mandate. The set of states is those who only implemented 1 annual mandate for women 50-64 and who participated in BRFSS for the entire 1987-2000 period. Models also control for state fixed effects and 5-year age group dummies. Standard errors are clustered at the state level.

Appendix Figure 6
Event Study Estimates of the Effect of Mandates for Annual Screenings on Past Year Mammogram
BRFSS 1987-2000, Adult women age 40-49
States with Exactly One Mandate for Annual Screening



Appendix Figure 4 presents the results of an event study using the 1987-2000 BRFSS. Time is recentered so that time 0 is the first quarter during which a state implemented an annual mandate. The set of states is those who only implemented 1 annual mandate for women 40-49. Models also control for state fixed effects and 5-year age group dummies. Standard errors are clustered at the state level.